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PRODUCTIVITY COSTS IN PATIENTS WITH RHEUMATOID ARTHRITIS IN SOUTH KOREA

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OBJECTIVES: The objectives of this study are to examine socio-demographic and clinical characteristics of patients with rheumatoid arthritis(RA) and to estimate productivity costs related to RA using data from the Fourth Korea National Health and Nutrition Examination Survey conducted in 2007(KNHANES IV-1) and 2008(KNHANES IV-2). **METHODS:** A total of 7559 adults of working age(19 ≤ age <65) were available for analyses, including 99 individuals with RA. Socio-demographic and clinical characteristics of subjects with RA were compared with those of subjects without RA. Multiple logistic regression was used to estimate adjusted employment rates of RA population. Percentage of work disability due to RA was estimated using the difference between employment rates of general population without RA and the adjusted employment rates of RA population. All statistical analyses were performed with SURVEY procedure of SAS/STAT® 9.1. **RESULTS:** The mean age of patients with RA was 50.2 years and 73.0% of them were female. Individuals with RA were older and had lower rates of subjective health awareness, higher rates of activity limitation and lower employment rates than individuals without RA. The percentage of sick leave due to RA was 2.5%. According to the results of multiple logistic regression, subjects with RA were less likely to be employed than subjects without RA (OR 0.63, 95% CI 0.41–0.97). The estimated percentage of work disability due to RA was 11.1%. By using the human capital approach, per capita productivity costs due to work disability were estimated to 3.6 million won($3594) per year. **CONCLUSIONS:** In South Korea, the percentages of work disability and sick leave for RA patients were lower than those reported in previous studies. Although other aspects of productivity costs related to RA could not be analyzed, this study could provide several important results concerning productivity costs in patients with RA.

MUSCULAR-SKELETAL DISORDERS – Patient-Reported Outcomes Studies

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DOSING PROFILE COMPARISON BETWEEN PATIENTS WITH FIBROMYALGIA INITIATING DULOXETINE AND PREGABALIN IN 2007: A LARGE NATIONAL RETROSPECTIVE COHORT STUDY

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OBJECTIVES: To compare dosing profiles between duloxetine and pregabalin among patients with fibromyalgia. **METHODS:** A retrospective cohort study was conducted on a large U.S. administrative claims database to examine commercially insured individuals aged 18 to 64 who had fibromyalgia and initiated (a 90-day clean period before initiation) duloxetine or pregabalin in 2007. Continuous enrollment in the 12 months pre- and post-index periods and at least 30-day supply of duloxetine or pregabalin over the 1-year follow-up were required for all selected patients. Average daily doses of all duloxetine or pregabalin prescriptions per person, average daily dose and average daily costs in each of the first 12 prescriptions, percent of patients with increased or decreased dose, and percent of daily dose change from previous prescription were compared between duloxetine and pregabalin cohorts. **RESULTS:** Both the duloxetine (n = 1699) and pregabalin (n = 2560) cohorts had a mean age of 51~52 years. Duloxetine-treated patients had an average initial daily dose of 55.6 mg versus 159.8 mg for the pregabalin-treated patients. The average daily dose per patient was 55.7 mg for duloxetine and 195.4 mg for pregabalin. The average duloxetine daily doses and daily costs ranged from 55.0 mg–60.2 mg and $3.9-$5.0 for the first 12 prescriptions and 159.8 mg–265.7 mg and $4.4–$5.0 for pregabalin. The percentages of daily-dose changes from previous prescription were −5.4%~3.0% for duloxetine and −1.0%~16.6% for pregabalin. Over the 1-year follow-up, both the percentages of patients with a dose increase (17.3% for duloxetine vs. 51.8% for pregabalin, $P < 0.01$) and a dose decrease (24.8% for duloxetine vs. 10.0% for pregabalin $P < 0.01$) were statistically different between cohorts. **CONCLUSIONS:** Among patients with fibromyalgia, duloxetine and pregabalin initiators had very different dosing profiles. The average daily dose for duloxetine was relatively stable over time, while pregabalin-treated patients had significant dose escalation over the 12-month follow-up period.

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COMPARISON OF DOSING PATTERNS BETWEEN FIBROMYALGIA PATIENTS WITH HIGH VERSUS LOW DULOXETINE OR PREGABALIN COMPLIANCE

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OBJECTIVES: To compare dosing patterns between patients with fibromyalgia who had high versus low duloxetine or pregabalin compliance, respectively. **METHODS:** Using a large U.S. administrative claims database, commercially insured patients aged 18–64 who had fibromyalgia and initiated duloxetine or pregabalin in 2007 were examined. Medication compliance was measured via medication possession ratio (MPR), with MPR¡Ý (<) 0.8 as high (low) compliance. All patients selected had continuous enrollment in the 12-month pre- and post-index periods, at least 30 days¡¯ supply of duloxetine or pregabalin in the 12-month post-index period, and were classified into 4 mutually exclusive cohorts based on their initiation agents (duloxetine vs. pregabalin) and compliance levels (high vs. low). Average daily doses of the first 8 prescriptions and duration between the initial dose and the first increased dose were compared across cohorts. **RESULTS:** Compared to the low compliance patients, patients with high compliance had significantly higher initial (duloxetine [N = 804 vs. 895]: 56.0 mg vs. 55.2 mg; pregablin [N = 710 vs. 1,850]: 164.9 mg vs. 157.9 mg) and average (duloxetine: 57.0 mg vs. 54.6 mg; pregabalin: 216.8 mg vs. 187.1 mg) daily doses (all $P < .05$). The average daily doses for the first 8 prescriptions ranged from 55.0 mg–58.3 mg and 56.0 mg–60.6 mg for duloxetine high and low compliance patients, respectively, while the pregabalin-treated patients had 157.9 mg–238.8 mg and 164.9 mg–248.3 mg, correspondingly. The duration from the initial dose to the first dose increase was 263.5 vs. 161.1 days ($P < .05$) for the duloxetine high versus low compliance patients and 268 vs. 135.4 days for the pregabalin high versus low compliance patients, respectively. **CONCLUSIONS:** Among patients with fibromyalgia, duloxetine and pregabalin initiators had different dosing patterns by compliance levels. Both duloxetine- and pregabalin-treated patients with high compliance had higher initial and average daily doses than those with low compliance. The average daily dose remained stable over time for duloxetine, however, increased for pregabalin for both compliance groups.

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PSYCHOMETRIC PROPERTIES OF THE GREEK MODIFIED HEALTH ASSESSMENT QUESTIONNAIRE FOR ASSESSING PHYSICAL DISABILITY IN RHEUMATOID ARTHRITIS

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OBJECTIVES: To test basic psychometric properties (validity, reliability and responsiveness) of the Greek version of the Modified Stanford Health Assessment Questionnaire (MHAQ) for assessment of physical disability in rheumatoid arthritis (RA). **METHODS:** The sample consisted of 120 RA patients (60.0% female, mean age 59.0) starting on biological antirheumatic drugs. Outcome measures were the MHAQ, the Disease Activity Score (DAS28) and the EQ-5D completed at baseline and at 3 months post-intervention. Item response frequencies and ceiling/floor effects were examined. Internal consistency reliability was assessed with Cronbach's alpha. Construct validity was examined by correlating baseline item and total scores of the MHAQ, with the EQ-5D and DAS28. MHAQ items were also tested for their correlation with the principal component. Effect sizes between MHAQ baseline and three-month data were compared to respective values for the other outcomes for evidence of responsiveness. **RESULTS:** Floor and ceiling effects for the eight MHAQ items ranged between 0–21.7% and 0.8–4.2% respectively, and the full range of responses was used in all but one item. Cronbach's alpha was 0.89 at baseline and 0.86 at three months post intervention, indicating good internal consistency of the instrument. Moderate correlations were noted (Spearman's ρ of 0.3 to 0.5) between most MHAQ and EQ-5D domains, and between the overall scores, and strong correlations (ρ > 0.5) between MHAQ and DAS28. Principal component analysis resulted in one factor explaining 57.1% of the total variance of the scale and all 8 items had high correlation coefficients (range 0.561–0.862) with this principal component. Responsiveness was satisfactory as the MHAQ effect size was 0.41, comparable to EQ-5D and DAS28 effect sizes (0.46 and 0.33 respectively). **CONCLUSIONS:** Evidence has been provided to support the reliability, validity and sensitivity to change of the Greek version of the MHAQ in the evaluation of functional status of RA patients.

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PSYCHOMETRIC PROPERTIES OF THE RHEUMATOID ARTHRITIS DISEASE ACTIVITY INDEX (RADAI) IN A COMMUNITY POPULATION IN THE US

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OBJECTIVES: The Rheumatoid Arthritis Disease Activity Index (RADAI) was developed to provide an easy to use self-administered assessment of rheumatoid arthritis (RA) to complement physician assessment. This study evaluates the psychometric properties of a web administered version of the RADAI in a community sample in the US. **METHODS:** A random sample of iGuard.org members in the US treated with medications for RA completed the RADAI and a series of other questions related to their disease. iGuard.org is a free medication monitoring service that is introduced to patients through multiple sources including physician, pharmacy and online referrals. Internal consistency of the RADAI was evaluated using Cronbach's alpha and item-total correlations, and factor analysis was used to confirm the domain structure. Convergent validity was established using correlations with patient global assessment of pain and number of painful joints. **RESULTS:** A total of 153 RA patients completed the study. The mean (SD) age of respondents was 52.7 (10.9) years, 71.2% were females with 54.3% diagnosed with RA 1 to 5 years ago and 39.2% diagnosed 5 to 15 years ago. The mean (SD) RADAI score was 4.59 (2.16), patient global assessment of pain was 52.11 (24.88) on a 100-point scale, and number of painful joints were 7.93 (4.22). RADAI items had good internal consistency with Cronbach's alpha of 0.89 and all item-total correlations >= 0.56. Factor analysis confirmed one factor with factor loadings of all the items on the factor of >= 0.57. As expected, RADAI scores were significantly correlated with patient global assessment of pain (0.646; $P < 0.0001$)